

IN THE CLAIMS:

Please amend Claims 28 to 32, 35, 37 to 38, 42 to 44 and 53 as follows.

28. (Currently Amended) An optical wiring device comprising:

an electric connecting portion, said electric connecting portion comprising a plurality of recessed couplers and a plurality of pins for connecting an external electric element with said optical wiring device;

optical transmission means for transmitting an optical signal; and

an optical conversion device that conducts an optoelectric conversion, said optical conversion device comprising at least a surface optical device and being disposed between said electric connecting portion and said optical transmission means,

wherein said optical transmission means and said optical conversion device are fixed such that said optical transmission means is optically coupled to said optical conversion device, and ~~said electric connecting portion is detachable~~

wherein said electric connecting portion is detachably connected to said optical conversion device.

29. (Currently Amended) An optical wiring device according to claim 28, wherein said optical conversion device includes a light emitting device and a light receiving device, which light receiving device is a p-i-n photodiode or a metal-semiconductor-metal (MSM) photodiode.

30. (Currently Amended) An optical wiring device according to claim 28, wherein said optical conversion device has a plurality of surface optical devices

with independent electrodes mounted in a flip-chip manner.

31. (Currently Amended) An optical wiring device according to claim 28, wherein an integrated electronic circuit device that drives said optical conversion device is disposed in said optical connecting device.

32. (Currently Amended) An optical wiring device according to claim 28, wherein said optical conversion device is a surface emitting device having multi-layer reflective mirrors.

33. (Previously Amended) An optical wiring device according to claim 28, wherein said optical transmission means includes a metal wiring.

34. (Previously Amended) An optical wiring device according to claim 33, wherein the metal wiring is formed as a wiring pattern.

35. (Currently Amended) An optical wiring device according to claim 28, wherein said optical conversion device is driven by a CMOS buffer of an external apparatus connected to said electric connecting portion.

36. (Previously Amended) An optical wiring device according to claim 28, wherein said electric connecting portion includes a recessed electric coupler.

37. (Currently Amended) An optical wiring device according to claim 28,

wherein a plate having a window is disposed between said optical conversion device and said optical transmission means and the window has a lens.

38. (Currently Amended) An optical wiring device according to claim 28, wherein said optical conversion device is prepared by a process comprising the steps of forming an active layer on a substrate and removing said substrate.

39. (Previously Amended) An optical wiring device according to claim 28, wherein said optical transmission means comprises a single mode fiber.

40. (Previously Amended) An optical wiring device according to claim 28, wherein said optical transmissions means is fixed in said optical connecting device by V-shaped grooves on a silicon substrate.

41. (Previously Amended) An optical wiring device according to claim 28, wherein said optical transmission means comprises a waveguide sheet in which waveguide cores are arranged in an array.

42. (Currently Amended) An optical wiring device comprising:
an electric connecting portion, said electric connecting portion comprising a plurality of recessed couplers and a plurality of pins for connecting an external electric element with said optical wiring device;

optical transmission means for transmitting an optical signal; and

an optoelectric converting portion, said optoelectric converting portion

including a plurality of surface emitting devices and a plurality of surface receiving devices and being disposed between said electric connecting portion and said optical transmission means,

wherein said optical transmission means and said optoelectric converting portion are fixed such that said optical transmission means is optically coupled to said optoelectric converting portion, and ~~said electric connecting portion is detachable~~

wherein said electric connecting portion is detachably connected to said optoelectric converting portion.

43. (Currently Amended) An optical wiring device comprising:

an electric connecting portion, said electric connecting portion comprising a plurality of recessed couplers and a plurality of pins for connecting an external electric element with said optical wiring device;

optical transmission means for transmitting an optical signal; and

an optoelectric converting portion, said optoelectric converting portion including a plurality of surface optical devices arranged in a two-dimensional array and being disposed between said electric connecting portion and the optical transmission means,

wherein said optical transmission means and said optoelectric converting portion are fixed such that said optical transmission means is optically coupled to said optoelectric converting portion, and ~~said electric connecting portion is detachable~~

wherein said electric connecting portion is detachably connected to said optoelectric converting portion.

44. (Currently Amended) An optical wiring device comprising:
an electric connecting portion, said electric connecting portion comprising a plurality of recessed couplers and a plurality of pins for connecting an external electric element with said optical wiring device;
optical transmission means for transmitting an optical signal; and
an optoelectric converting portion, said optoelectric converting portion including at least a surface optical device and through-hole and being disposed between said electric connecting portion and said optical transmission means,
wherein said optical transmission means and said optoelectric converting portion are fixed such that said optical transmission means is optically coupled to said optoelectric converting portion, and ~~said electric connecting portion is detachable~~
wherein said electric connecting portion is detachably connected to said optoelectric converting portion.

45. (Previously Amended) An electronic device comprising an optical wiring device according to claim 28 to connect at least first and second boards.

46. (Previously Amended) An electronic device comprising an optical wiring device according to claim 42 to connect at least first and second boards.

47. (Previously Amended) An electronic device comprising an optical wiring device according to claim 43 to connect at least first and second boards.

48. (Previously Amended) An electronic device comprising an optical

wiring device according to claim 44 to connect at least first and second boards.

49. (Previously Amended) An electronic device comprising a display, a computer, and a connecting means for wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 28.

50. (Previously Amended) An electronic device comprising a display, a computer, and a connecting means for wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 42.

51. (Previously Amended) An electronic device comprising a display, a computer, and a connecting means for wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 43.

52. (Previously Amended) An electronic device comprising a display, a computer, and a connecting means for wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 44.

53. (Currently Amended) An optical wiring device comprising:
an ~~electrical~~ electric connecting portion, said electric connecting portion
comprising a plurality of recessed couplers and a plurality of pins for connecting an
external electric element with said optical wiring device;

an optical transmission means for transmitting an optical signal, said optical transmission means including a metal wiring; and

an optical conversion device for conducting an optoelectric conversion, said optical conversion device disposed between said electric connecting portion and said optical transmission means,

wherein said optical transmission means and said optical conversion device are fixed such that said optical transmission means is optically coupled to said optical device, and ~~said electric connecting portion is detachable~~

wherein said electric connecting portion is detachably connected to said optical conversion device.